AMENDMENTS TO THE CLAIMS

1-17: (canceled)

18. (Currently Amended) A pair of measuring electrodes, comprising a first and a second electrode, and an insulation layer arranged between the electrodes, wherein one or more nanopores are provided in the second electrode, wherein the nanopores extend through the insulation layer to the first electrode, the surface of which is at least partially uncovered by the nanopores, and wherein the nanopores have an opening width selected from the range of approximately 20 nm to approximately 1000 nm. ~~50 nm.~~

19. (original) The pair of measuring electrodes according to claim 18, wherein the electrodes are substantially sheet-like.

20. (original) The pair of measuring electrodes according to claim 18, wherein the nanopores have an opening width of approximately 100 nm.

21-30: (canceled)

31. (Currently Amended) A biosensor comprising at least one pair of measuring electrodes, wherein the pair of measuring electrodes comprises a first and a second electrode and an insulation layer arranged between the electrodes, wherein one or more nanopores are provided in the second electrode, wherein the nanopores extend through the insulation layer to the first electrode, the surface of which is at least partially uncovered by the nanopores, and wherein the nanopores have an opening width selected from the range of approximately 20 nm to approximately 1000 nm. ~~50 nm.~~

32. (original) The biosensor according to claim 31, wherein the at least one pair of measuring electrodes is arranged on a substrate.

33. (original) The biosensor according to claim 32, further comprising at least one additional electrode arranged on the substrate, wherein the additional electrode serves as a reference electrode or counterelectrode.

34. (original) The biosensor according to claim 33, wherein the additional electrode has a surface area which is greater than the surface area of the second electrode.

35. (original) The biosensor according to claim 33, wherein the additional electrode has a surface area which is at least 10 times greater than the surface area of the second electrode.

36. (original) The biosensor according to claim 31, wherein the biosensor is designed as a chip with supply lines for the electrodes.

37-46: (canceled)

47. (Currently Amended) An electrochemical cell comprising a biosensor, wherein the biosensor comprises at least one pair of measuring electrodes, wherein the pair of measuring electrodes comprises a first and a second electrode and an insulation layer arranged between the electrodes, wherein one or more nanopores are provided in the second electrode, wherein the nanopores extend through the insulation layer to the first electrode, the surface of which is at least partially uncovered by the nanopores, and wherein the nanopores have an opening width selected from the range of approximately 20 nm to approximately 1000 nm. ~~50 nm.~~

48. (original) The electrochemical cell according to claim 47, wherein the cell comprises a receiving space for an electrolyte, and wherein the electrolyte includes molecules to be recorded using the biosensor.

49. (original) The electrochemical cell according to claim 47, wherein the cell comprises terminals for a readout circuit.

50. (original) The electrochemical cell according to claim 49, wherein the readout circuit is a potentiostat circuit.

51-63: (canceled)

64. (original) A method of manufacturing a pair of measuring electrodes, comprising:

a) applying a first electrode to an insulating substrate;

b) masking the first electrode using a nanostructured shadow mask made from nanoparticles;

c) applying an insulation layer to the first electrode, without any insulation material being deposited in the region of the nanoparticles;

d) applying a second electrode to the insulation layer, without any electrode material being deposited in the region of the nanoparticles, wherein the second electrode has a layer thickness in the region of the radius of the nanoparticles; and

e) removing the nanoparticles.

65. (original) The method according to claim 64, wherein the first electrode is substantially sheet-like.

66. (original) The method according to claim 64, wherein the first electrode has a layer thickness selected from the range of approximately 50 nm to approximately 1000 nm.

67. (original) The method according to claim 64, wherein the first electrode has a layer thickness selected from the range of approximately 100 nm to approximately 200 nm.

68. (original) The method according to claim 64, wherein the nanoparticles have a diameter selected from the range of approximately 20 nm to approximately 1000 nm.

69. (original) The method according to claim 64, wherein the nanoparticles have a diameter of approximately 100 nm.

70. (original) The method according to claim 64, wherein the second electrode has a layer thickness selected from the range of approximately 20 nm to approximately 500 nm.

71. (original) The method according to claim 64, wherein the layer thickness of the second electrode is approximately 50 nm.

72-79: (canceled)

80. (New) The pair of measuring electrodes according to claim 18, wherein the nanopores have an opening width of approximately 50 nm.

81. (New) The pair of measuring electrodes according to claim 18, wherein the nanopores have an opening width of approximately 200 nm.

82. (New) The pair of measuring electrodes according to claim 31, wherein the nanopores have an opening width of approximately 50 nm.

83. (New) The pair of measuring electrodes according to claim 31, wherein the nanopores have an opening width of approximately 100 nm.

84. (New) The pair of measuring electrodes according to claim 31, wherein the nanopores have an opening width of approximately 200 nm.